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Applicant's Name: Peiguang Zhou et al.

Serial No.: 09/945,239 Examiner: J. Boyd

Filing Date: 08/31/01 Art Unit: 1714 Confirmation No.: 1306

Application Title: HOT-MELT ADHESIVE BASED ON BLEND OF AMORPHOUS  
AND CRYSTALLINE POLYMERS FOR MULTILAYER  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Peiguang Zhou, et al.

Art Unit 1714

Serial No. 09/945,239

Filed August 31, 2001

Confirmation No. 1306

For HOT-MELT ADHESIVE BASED ON BLEND OF AMORPHOUS AND  
CRYSTALLINE POLYMERS FOR MULTILAYER BONDING

Examiner Jennifer A. Boyd

SUBSTITUTE APPEAL BRIEF

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Peiguang Zhou, et al. Art Unit 1714  
Serial No. 09/945,239  
Filed August 31, 2001  
Confirmation No. 1306  
For HOT-MELT ADHESIVE BASED ON BLEND OF AMORPHOUS AND  
CRYSTALLINE POLYMERS FOR MULTILAYER BONDING  
Examiner Jennifer A. Boyd

APPEAL BRIEF

This is a substitute appeal brief submitted to correct the Summary of Claimed Subject Matter as requested in the Order Returning Undocketed Appeal to Examiner mailed August 28, 2006. The original appeal, which was faxed on January 6, 2006, was from the final rejection of the claims of the above-identified application made in the Office action dated November 10, 2005. A Notice of Appeal was faxed on December 7, 2005.

I. REAL PARTY IN INTEREST

The real party in interest in connection with the present appeal is Kimberly-Clark Worldwide, Inc. of 401 N. Lake Street, Neenah, Wisconsin 54957-0349, a corporation of the state of Delaware, owner of a 100 percent interest in the pending application.

II. RELATED APPEALS AND INTERFERENCES

Appellants are aware of two pending appeals, which may be related to, directly affect or be directly affected by, or have a bearing on, the Board's decision in the pending appeal. Specifically, there are pending appeals in the related cases of

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U.S. Application Nos. 10/260,951 (filed on September 30, 2002)  
and 10/266,440 (filed on October 8, 2002).

### III. STATUS OF CLAIMS

Claims 24-33 and 70-82 are currently pending in the application. A copy of the pending claims appears in the Claims Appendix of this Brief.

Claims 24-33 and 70-82 stand rejected under 35 U.S.C. §103(a). The rejection of claims 24-33 and 70-82 under 35 U.S.C. §103(a) is being appealed.

### IV. STATUS OF AMENDMENTS

No amendments have been filed after the final rejection.

### V. SUMMARY OF CLAIMED SUBJECT MATTER

The following summary correlates claim elements to specific embodiments described in the application specification, but does not in any manner limit claim interpretation. Rather, the following summary is provided only to facilitate the Board's understanding of the subject matter of this appeal.

People rely on disposable absorbent articles to make their lives easier. Disposable absorbent articles, such as adult incontinence articles and diapers, are generally manufactured by adhesively bonding several components together to form a laminated structure. In many instances, a hot-melt adhesive, i.e., a polymeric formulation that is heated to substantially liquefy the formulation prior to application to one or both materials when making a laminate, is used in making a laminated

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structure. While such formulations generally work, they can be costly and their performance properties, such as bond strength, can be improved. (see Specification at page 3, lines 3-7). Additionally, the propensity of hot-melt adhesives to migrate from the laminated structure and onto the surfaces of ultrasonic-bonding equipment used to ultrasonically bond the components, can be reduced or eliminated. (see Specification at page 3, lines 9-12).

The present invention thus relates to laminated structures and disposable absorbent articles manufactured using an adhesive composition having better performance characteristics and/or costing less than conventional hot-melt adhesives. In one embodiment, the laminated structure comprises two layers. At least a portion of the first layer is attached to at least a portion of the second layer using an adhesive composition. (see Specification p. 10, lines 6-13). Suitable materials for the first and second layers may include a nonwoven, a film, a woven material, an elasticized component, a substrate comprising cellulosic material, thermoplastic material, some combination of these, or the like. (see Specification p. 11, lines 15-19 and Specification p. 16, lines 4-11). For example, as disclosed in the Specification on p. 28, lines 11-15, materials for use in the laminated structure can include a necked-bonded laminate, which generally comprises a polyethylene layer sandwiched between two polypropylene, spunbonded layers; a polypropylene, spunbonded layer; or an outercover comprising a polyethylene layer and a polypropylene, spunbonded layer.

The adhesive composition for use in bonding the first and second layers of the laminated structure comprises both crystalline and amorphous polymers (Specification p. 4, lines 2-5). In one embodiment, the adhesive composition comprises an

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atactic polymer having a degree of crystallinity of about 20% or less and a number-average molecular weight of from about 1000 to about 300,000 and an isotactic polymer having a degree of crystallinity of about 40% or more and a number-average molecular weight of from about 10,000 to about 100,000. The adhesive composition is hot-melt processable at a temperature of about 450 degrees Fahrenheit or less. (see Specification p. 7, line 14 through p. 8, line 3).

As noted above, the adhesive composition has improved performance characteristics as compared to the performance characteristics of conventional hot-melt adhesives. For example, in one embodiment, a laminated structure manufactured using an adhesive composition of the present invention has a static-peel-failure time, which is a method of determining bond strength, of about 30 hours, while laminated substrates made with various conventional hot-melt adhesives failed after about 4 hours. (see Specification at p. 7, lines 6-13).

Along with providing improved performance properties, the adhesive composition costs less than a conventional hot-melt adhesive. Generally, conventional hot-melt adhesives are formulated by combining several components, including a polymer or polymers for cohesive strength, resins, tackifiers, viscosity modifiers, and other additives. In some embodiments of the present invention, the atactic and isotactic polymers alone provide improved performance characteristics compared to conventional hot-melt adhesives.

In one specific embodiment, as set forth in independent claim 24, the present invention is directed to a laminated structure comprising a first layer and a second layer, wherein at least a portion of the first layer is attached to at least a portion of the second layer using an adhesive composition. The



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first layer is a neck-bonded laminate. The adhesive composition comprises an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 1000 and about 300,000, and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3000 and about 200,000. (see Specification at p. 7, line 14 through p. 8, line 3, p. 11, lines 15-19, and p. 16, lines 4-11).

In another specific embodiment, as set forth in independent claim 70, both the first and second layers are neck-bonded laminate substrates. Specifically, the laminated structure comprises a first neck-bonded laminate substrate and a second neck-bonded laminate substrate, said first neck-bonded laminate substrate being bonded to said second neck-bonded laminate substrate with an adhesive composition. The adhesive composition comprises an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 1000 and about 300,000, and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3000 and about 200,000. (see Specification at p. 7, line 14 through p. 8, line 3, p. 11, lines 15-19, and p. 16, lines 4-11).

#### VI. GROUND'S OF REJECTION TO BE REVIEWED ON APPEAL

The claims 24-33 and 70-82 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tanzer (WO 01/15646) in view of Hall et al. (U.S. 3,370,106).

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VII. ARGUMENT

Claims 24-33 and 70-82 are patentable under 35 U.S.C. §103(a) over Tanzer (WO 01/15646) in view of Hall et al. (U.S. 3,370,106).

Claim 24 is directed to a laminated structure comprising at least a portion of a first layer attached to at least a portion of a second layer using an adhesive composition. The adhesive composition comprises an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 1,000 and about 300,000, and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3,000 and about 200,000. The first layer is a neck-bonded laminate substrate.

Tanzer discloses an absorbent composite comprising a selectively stretchable liquid permeable first substrate layer, a selectively stretchable second substrate layer and pockets of superabsorbent material formed between the first layer and second layer.<sup>1</sup> In one embodiment, the layers may be a neck-bonded laminate of a necked, inelastic nonwoven filament web to an elastic film.<sup>2</sup> The pockets are defined by attachment means which serves to join the first and second layers to form a laminate. Suitable attachment means include water sensitive adhesives.<sup>3</sup> A secondary attachment means can include water

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<sup>1</sup>Tanzer specification at page 6, lines 1-5.

<sup>2</sup>See Tanzer specification at page 3, lines 17-18.

<sup>3</sup>See Tanzer specification at page 6, lines 15-20.

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insensitive adhesives.<sup>4</sup>

As noted by the Office, Tanzer fails to teach the adhesive composition required in claim 24, which comprises an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 1,000 and about 300,000, and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3,000 and about 200,000. In an attempt to find each and every element of claim 24 as required by the M.P.E.P. for a determination of *prima facie* obviousness, the Office cites the Hall et al. reference for combination with Tanzer.

Hall et al. disclose a hot-melt adhesive suitable for bonding two materials together such as a corrugated paper medium and a 50-pound kraft paper facer sheet to produce corrugated paper board. The hot-melt adhesive is also suitable for the fabrication of paper cartons.<sup>5</sup> The adhesive composition comprises 60 to 95 weight percent atactic polypropylene and 5 to 40 weight percent polyethylene or isotactic polypropylene. The atactic polypropylene has a molecular weight of 15,000 to 60,000 and the isotactic polypropylene has a molecular weight of up to about 500,000, and preferably from 85,000 to 95,000.

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<sup>4</sup>See Tanzer specification at page 6, lines 26-27.

<sup>5</sup>In column 1, lines 36-38, Hall et al. disclose that the hot-melt adhesive composition may be used for bonding wood, paper, plastics, textiles, and other materials. As discussed more fully below, this reference fails to suggest or disclose that the disclosed adhesive composition could be used to bond a portion of a first layer to a portion of a second layer, wherein the first layer is a neck-bonded laminate substrate as required by claim 24.

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In order for the Office to show a *prima facie* case of obviousness, M.P.E.P. §2143 requires that the Office must meet three criteria: (1) the prior art reference must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references, and (3) there must be some reasonable expectation of success. The Office has clearly failed to meet its burden under (2) above, as there is no motivation or suggestion to combine the Tanzer and Hall et al. references to arrive at Applicants' claim 24.

As noted in M.P.E.P. §2142, in establishing obviousness, the Office must show references that teach all of the claimed limitations along with some motivation or suggestion, either in the references themselves or in knowledge generally available to one skilled in the art, to combine the references and arrive at the claimed subject matter.<sup>6</sup> The mere fact that the references can be combined to arrive at the claimed subject matter does not render the resultant combination obvious, unless the prior art also suggests the desirability of the combination. In re Mill, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). A close reading of the cited references clearly indicates that one skilled in the art would not have been so motivated and, without Applicants' disclosure as a blueprint (which the Office had the benefit of utilizing), such a combination of the Tanzer and Hall

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<sup>6</sup>As further set forth in M.P.E.P. §2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the reference itself, or in the knowledge generally available to one of ordinary skill in the art.

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et al. references would not have been made.<sup>7</sup>

The Office asserts that Hall et al. provide sufficient motivation to use the adhesive composition of Hall et al. in the absorbent composite of Tanzer due to the desire to produce a composite containing a low-cost adhesive with high performance properties. With all due respect, Applicants submit that there is not a convincing line of reasoning as to why the combination of these references would have been obvious. Specifically, why would one skilled in the art pick Hall et al.'s composition over all of the other low-cost high performing compositions?

Tanzer simply teaches that neck-bonded laminates can be bonded adhesively to another material with a hot melt adhesive; and even provides one commercially acceptable adhesive. The Tanzer reference fails to provide a reason why one skilled in the art would choose one adhesive over the other. The Hall et al. reference is directed to a hot-melt adhesive suitable for bonding two materials together such as a corrugated paper medium and a 50-pound kraft paper facer sheet to produce corrugated paper board. While the adhesive of Hall et al. can also be used for bonding wood, paper, plastics, textiles, and other materials, why would one skilled in the art look to the Hall et

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<sup>7</sup>M.P.E.P. §2142 further provides that in order to reach a proper determination under 35 U.S.C. §103(a), the Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. Knowledge of Applicants' disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences." The tendency to resort to "hindsight" based upon Applicants' disclosure is often difficult to avoid due to the very nature of the examination process. However, as stated by the Federal Circuit, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. Grain Processing Corp. v. American-Maize-Products, Co., 840 F.2d 902, 904 (Fed. Cir. 1988).

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al. adhesive over any other hot melt adhesive for bonding the necked, nonwoven layer and bottom layer of the neck-bonded laminate of Tanzer? No where in Hall et al. is it disclosed to use the adhesive composition for neck-bonded laminate substrates.

As stated in Application of Kuderna, when approached with the issue of patentability, it must be viewed in terms of "what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all of the relevant teachings in the art, not in view of first one and then another of the isolated teachings in the art." (emphasis added)<sup>8</sup> As defined in the M.P.E.P., to be relevant or analogous art, "the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned."<sup>9</sup>

Specifically, in Kuderna, the Office rejected Kuderna's compound by picking one similar compound from more than fifty

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<sup>8</sup> 426 F.2d 385, 389 (C.C.P.A. 1970). Additionally, in In re Gorman, the Federal Circuit ruled that when "determining whether a new combination of known elements would have been obvious to one of ordinary skill... the test is whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention." 18 U.S.P.Q.2d 1885, 1888 (Fed. Cir. 1991); See also In re Young, 927 F.2d 588, 591, 18 U.S.P.Q.2d 1089, 1091 (Fed. Cir. 1991); M.P.E.P. §2143.01 ("The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts.") This requires that all hot-melt adhesive compositions be considered.

<sup>9</sup> M.P.E.P. §2141.01(a). Additionally, a reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have

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compounds tested and mentioned specifically in one of the prior art references. The court went on to rule that there was no reason for one skilled in the art to emphasize that one isolated teaching, and as such, Kuderna's claimed compound was not obvious in view of the cited references.

Applicants' case is similar as there is no reason for one skilled in the art at the time of the invention to emphasize the adhesive of Hall et al. over any of the other hot-melt adhesives available in the art.

With all due respect, it appears that the Office has used impermissible hindsight analysis and reconstruction when combining the Tanzer reference with the Hall et al. reference. Notably, it would be clear to one skilled in the art reading Tanzer that a low-cost adhesive with high performance properties be used to bond the substrates described therein. There are, however, a myriad of low-cost, high performance adhesives in the art, many of which are used in diapers and other absorbent substrate applications. Hall et al. do not even mention such use. What is important is that there is no motivation or suggestion to use the composition of Hall et al. over any of the other enormous number of low-cost adhesives described in the art, which have high performance properties.

Moreover, Applicants note that in the previous Office action dated August 13, 2003, claims 70-72 were rejected under 35 U.S.C. §103(a) as being unpatentable over the same Tanzer and Hall et al. references in view of a third reference, the Wang reference (U.S. 6,329,468). As noted above, all of the previously set forth rejections have been withdrawn. Claim 70, at the time of the response to the August 13, 2003 Office action

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commended itself to an inventor's attention considering his problem. In re Clay, 966 F.2d 656, 659 (Fed. Cir. 1992).

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(Amendment B filed November 13, 2003), was similar to the currently pending claim 24 and further required the second layer to be a neck-bonded laminate substrate. As such, currently pending claim 24 is patentable over the Tanzer and Hall et al. references for the same reasons that claim 70 was patentable over the Tanzer and Hall et al. references in view of the Wang reference set forth in Amendment B filed November 11, 2003. As stated in the final Office action dated November 10, 2005, the Office considers Wang to no longer be relevant as it was not relied upon in the current rejection. Applicants respectfully disagree, as noted above, obviousness should be determined in view of all of the teachings in the art. As Wang is in the field of hot melt adhesives and further discusses the use of atactic and isotactic polymers in adhesive compositions, Wang is considered analogous art and must be considered, despite not being expressly cited in the current rejection.

In Arkie Lures, Inc. v. Gene Larew Tackle, Inc., the Federal Circuit held that Larew's invention, which was directed to plastic salty fish bait, was not obvious as both the prior art and experts in the field strongly cautioned against the use of salt on fishing bait.<sup>10</sup> Specifically, the court ruled that the question was not whether salt 'could be used,'... but whether it was obvious [to one of ordinary skill] to do so in light of

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<sup>10</sup> 119 F.3d 953 (Fed. Cir. 1997). Specifically, Larew's invention was directed to a plastic salty lure for fishing and among the prior art cited by the Office against Larew was a book disclosing salted pork rind as bait, a patent describing a fishing fly formed from squirrel hair with yeast and salt baked in, a patent directed to a plastic lure containing an organic fish attractant, and a patent directed to lure additives having the flavor or odor of natural bait. In determining that Larew's invention was not obvious, the Federal Circuit looked both at the prior art cited and to outside expert testimony.



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all relevant factors (emphasis added).<sup>11</sup>

A close reading of the Wang reference, which cannot simply be discounted by the Office, clearly indicates that one skilled in the art would be guided away from combining the Tanzer and Hall et al. references to arrive at Applicants' invention. As defined by the Federal Circuit, a reference teaches away if "one of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that the Applicant took."<sup>12</sup> Specifically, Wang teaches that the use of atactic and isotactic polymers in adhesive compositions for use in disposable nonwoven applications has many disadvantages. This teaching is highly relevant to the issue of whether one of ordinary skill, upon reading Wang, would be led to use the adhesive of Hall et al. in the absorbent composites of Tanzer. As such, the teaching of Wang must be considered by the Office.

Wang teaches the use of a single block blend polymeric material (referred to as a flexible polyolefin) which has segments or blocks of regular isotactic structure that are interspersed by segments or blocks of atactic structure, along with at least two other components. Noting that the flexible polyolefin has a "unique" molecular structure, Wang notes numerous improvements as compared to conventional atactic and isotactic polymers (which are disclosed by Hall et al. and specifically relied upon by the Office). Additionally, and

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<sup>11</sup> Id. at 957.

<sup>12</sup> Micro Chemical, Inc. v. Great Plains Chemical Co., Inc., 103 F.3d 1538, 1546 (Fed. Cir. 1997). Additionally, the Federal Circuit in Micro Chemical decided that the "long-felt need in the face of prior art later asserted to lead to a solution tends to negate the proposition that the combination of such prior art would have been obvious." Id. at 1547.

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critically, Wang discusses, in numerous paragraphs in columns three and four, the shortcomings and limitations of hot-melt adhesives comprising atactic and isotactic polymers in place of the flexible polyolefins. For example, in column 3, lines 37-47 Wang states that hot-melt adhesives comprising atactic polypropylene generally have poor cohesive strength, poor heat resistance, low elevated temperature peel and low shear values. Significantly, Wang further states:

"[Atactic polypropylenes] have not found much use in disposable nonwoven applications where a combination of high bond strength at very low coating weight and easy processability by spray techniques mentioned above is required. [Atactic polypropylene] based adhesives usually lack such capability." Column 3 lines 42-47.

Further, at column 4 lines 13-19 Wang states:

"As noted above, [atactic polypropylenes] differ significantly from [flexible polyolefins] used in the present invention in both molecular structure, average molecular weight, physical and mechanical properties. These prior art [atactic polypropylene] adhesives are formulated for applications other than for disposable nonwovens products and usually lack sprayability."  
Emphasis added.

Additionally, at column 4 lines 55-60 Wang states:

"The compositions of the present invention have overcome the shortcomings of the prior art amorphous poly-alpha-olefins and block copolymer based adhesives and provide excellent heat stability, improved cohesive strength, low viscosity, and good adhesion to a variety of substrates and good processability with conventional coating equipment."

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One skilled in the art and reading the Wang reference would actually be taught or guided away from utilizing the adhesive composition set forth in claim 24 of the present invention and from looking at any reference that suggests or teaches a combination of atactic polypropylene and isotactic polypropylene as Hall et al. do.<sup>7</sup> Wang clearly sets forth the shortcomings of hot-melt adhesives comprising isotactic polypropylene and atactic polypropylene and specifically states that such compositions are formulated for applications other than for disposable nonwoven products because such compositions lack basic characteristics required for suitable use, such as thermal stability and cohesive strength. Because Wang teaches squarely away from the teachings in Hall et al. of a hot-melt adhesive comprising atactic polypropylene, one skilled in the art would not, and could not, have been properly motivated to look at the Hall et al. reference after reading the Wang reference.

Moreover, in the final Office action dated November 10, 2005, the Office states that Wang does not indicate that the specific adhesive of Hall et al. would have the above shortcomings, and thus Hall et al. cannot be determined to be unsuitable for use in the products of Tanzer. While Wang does not specifically discuss the adhesive of Hall et al., Wang does indicate that the combination of atactic polymers and isotactic polymers in general is not considered useful in disposable absorbent products and thus, one skilled in the art, reading Wang, would not be led to use the atactic polymer/isotactic

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<sup>7</sup>Applicants note that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983).

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polymer adhesive of Hall et al. in Tanzer's absorbent composites.

There is simply no motivation to combine the Tanzer and Hall et al. references to arrive at the instant claim 24, and claim 24 cannot be said to be obvious in view of the cited references.

Claims 25-33 are dependent upon claim 24 and are patentable for the same reasons as claim 24 set forth above, as well as for the additional elements they require.

Claim 70 is similar to claim 24 and is directed to a laminated structure comprising a first neck-bonded laminate substrate and a second neck-bonded laminate substrate, wherein the first neck-bonded laminate substrate is bonded to the second neck-bonded laminate substrate with an adhesive composition. The adhesive composition comprises an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight of from about 1,000 to about 300,000 and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight of from about 3,000 to about 200,000.

Both Tanzer and Hall et al. are discussed above.

As stated above, Tanzer fails to disclose an adhesive composition comprising an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight of from about 1,000 to about 300,000 and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight of from about 3,000 to about 200,000. Further, as stated above, one skilled in the art would not and could not find motivation to combine the adhesive composition of Hall et al. with the substrates of Tanzer to arrive at instant claim 70. As such, claim 70 is not

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obvious over the cited references.

Claims 71-82 are dependent upon claim 70 and are patentable for the same reasons as claim 70 set forth above, as well as for the additional elements they require.

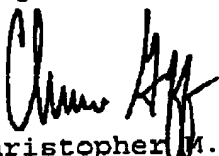
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VIII. Conclusion

A *prima facie* case of obviousness has not been established pursuant to 35 U.S.C. § 103, because the Office has failed to show sufficient motivation for the references to be combined to arrive at each and every element of claims 24-33 and 70-82. For this reason, and for those more fully stated above, Appellants respectfully request the Office's rejections be reversed and claims 24-33 and 70-82 be allowed.

The Commissioner is hereby authorized to charge any fees which may be required to Deposit Account No. 19-1345.

Respectfully submitted,



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## CLAIMS APPENDIX

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Claims 1-23 (Cancelled).

24. (Previously Presented) A laminated structure comprising at least a portion of a first layer attached to at least a portion of a second layer using an adhesive composition, the adhesive composition comprising an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight between about 1,000 and about 300,000, and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight between about 3,000 and about 200,000, wherein the first layer is a neck-bonded laminate substrate.

25. (Original) The laminated structure of Claim 24, wherein the laminated structure has a static-peel-failure time of at least about 1 hour.

26. (Original) The laminated structure of Claim 24, wherein the laminated structure has a static-peel-failure time of at least about 8 hours.

27. (Original) The laminated structure of Claim 24,

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wherein the laminated structure has a static-peel-failure time of at least about 24 hours.

28. (Original) The laminated structure of Claim 24, wherein the laminated structure has a relative accretion value of less than 1.

29. (Original) The laminated structure of Claim 24, wherein the laminated structure has a relative accretion value of less than 0.5.

30. (Original) The laminated structure of Claim 24, wherein the laminated structure has a relative accretion value of less than 0.2.

31. (Previously Presented) The laminated structure of Claim 24, wherein the first and second layers comprise a single material, said single material being folded over and adhesively bonded to itself.

32. (Previously Presented) The laminated structure of Claim 24, wherein the second layer is selected from the



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group consisting of: nonwoven material, woven material, film, and an elasticized component.

33. (Previously Presented) The laminated structure of Claim 24, wherein the second layer comprises at least one of the group consisting of cellulosic material, thermoplastic material, and combinations thereof.

Claims 34-69 (Cancelled).

70. (Previously Presented) A laminated structure comprising a first neck-bonded laminate substrate and a second neck-bonded laminate substrate, said first neck-bonded laminate substrate being bonded to said second neck-bonded laminate substrate with an adhesive composition comprising an atactic polymer having a degree of crystallinity of less than about 20% and a number-average molecular weight of from about 1,000 to about 300,000 and an isotactic polymer having a degree of crystallinity of at least about 40% and a number-average molecular weight of from about 3,000 to about 200,000.

71. (Previously Presented) The laminated structure as set forth in claim 70 wherein at least one of said first neck-bonded

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laminate substrate and said second neck-bonded laminate substrate comprises a polyethylene layer sandwiched between two spunbond polypropylene layers.

72. (Previously Presented) The laminated structure as set forth in claim 70 wherein one or both of said first neck-bonded laminate substrate and said second necked-bonded laminated substrate comprises a material selected from the group consisting of a nonwoven material, a woven material, a film, an elasticized component, a cellulosic material, a thermoplastic material, a polypropylene spunbonded material, or combinations thereof.

73. (Previously Presented) The laminated structure as set forth in claim 70 wherein said adhesive composition is in liquefied form.

74. (Previously Presented) The laminated structure as set forth in claim 70 wherein said adhesive composition is hot-melt processable at a temperature of about 450°F or less.

75. (Previously Presented) The laminated structure as set forth in claim 70 wherein the degree of crystallinity of

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said atactic polymer is less than about 15%.

76. (Previously Presented) The laminated structure as set forth in claim 70 wherein the degree of crystallinity of said isotactic polymer is at least about 60%.

77. (Previously Presented) The laminated structure as set forth in claim 70 wherein said adhesive composition comprises between about 50 and about 90 weight percent of the atactic polymer and between about 5 and about 50 weight percent of the isotactic polymer.

78. (Previously Presented) The laminated structure as set forth in claim 70 wherein said atactic polymer is selected from the group consisting of low density polyethylene, atactic polystyrene, atactic polybutene, amorphous polyolefin copolymer and combinations thereof.

79. (Previously Presented) The laminated structure as set forth in claim 70 wherein said atactic polymer comprises atactic polypropylene.

80. (Previously Presented) The laminated structure as

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set forth in claim 70 wherein said isotactic polymer is selected from the group consisting of high density polyethylene, isotactic polystyrene, isotactic polybutene and combinations thereof.

81. (Previously Presented) The laminated structure as set forth in claim 70 wherein said isotactic polymer comprises isotactic polypropylene.

82. (Previously Presented) The laminated structure as set forth in claim 70 wherein at least one of said first neck-bonded laminate substrate and said second neck-bonded laminate substrate is a stretch-bonded laminate composed of an elongated elastic web or elongated elastomeric strands bonded between two spunbonded layers.

Claims 83-107 (Cancelled).

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**EVIDENCE APPENDIX**

Applicants rely on the Wang reference (U.S. 6,329,468) to support the above arguments. Wang was cited in a previous Office action (mailed August 13, 2003) received in the instant application. Applicants enclose herewith copies of the Wang reference and the August 13, 2003 Office action.

**RELATED PROCEEDINGS APPENDIX**

None.

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